



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,418	10/27/2003	Richard M. Barth	060809-0142-US	4481
38426	7590	09/17/2004	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP/RAMBUS INC. 2 PALO ALTO SQUARE 3000 EL CAMINO REAL PALO ALTO, CA 94306			VITAL, PIERRE M	
			ART UNIT	PAPER NUMBER
			2188	

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/695,418	BARTH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Pierre M. Vital	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 27 October 2003.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 27 October 2003 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/27/03</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

1. This Office Action is in response to Application No. 10/695,418 filed October 27, 2003. Claim 1 is pending in this application.
2. The specification and the claims have been examined with the results that follow.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,640,292. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the 6,640,292 patent as shown in the table below contains every element of claim 1 of the instant application and as such anticipates claim 1 of the instant application.

US Patent 6,640,292	Instant Application 10/695,418
1. A memory system controlling data access, comprising:	1. A memory system controlling data access, comprising:
a memory device comprising a retire buffer;	a memory device comprising a retire buffer;
a memory controller receiving a read request, and comprising:	a memory controller receiving a read request, and comprising:
an un-retired data buffer capable of holding at least one write address associated with un-retired write data stored in the retire buffer; and	an un-retired data buffer capable of holding at least one write address associated with un-retired write data stored in the retire buffer; and
a comparator receiving and comparing the at least one write address with a read address associated with the read request;	a comparator receiving and comparing the at least one write address with a read address associated with the read request;
wherein upon determining in the comparator that the at least one write address and the read address are the same, the read request is stalled in the memory controller.	wherein upon determining in the comparator that the at least one write address and the read address are the same, the read request is stalled in the memory controller.

during a second time period during which the read request is received, which immediately follows a first time period during which the first write address is stored in the un-retired data buffer, the first write address remains stored in the un-retire data buffer; ...	
---	--

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eberhard et al. (US6,442,655) and Harriman (US6,330,645).

As per claim 1, Eberhard discloses a memory system controlling data access, comprising a memory device comprising a retire buffer [col. 4, lines 36-44]; a memory controller receiving a read request [col. 2, lines 8-9]; and comprising an un-retired data buffer capable of holding at least one write address associated with un-retired write data stored in the retire buffer [col. 4, lines 40-44]; a comparator receiving and comparing the

at least one write address with a read address associated with the read request [col. 2, lines 20-24].

However, Eberhard does not specifically teach upon determining in the comparator that the at least one write address and the read address are the same, stalling the read request in the memory controller as recited in the claim.

Harriman discloses upon determining in the comparator that the at least one write address and the read address are the same, stalling the read request in the memory controller [col. 5, lines 1-6, 24-27].

It would have been obvious to one of ordinary skill in the art, having the teachings of Eberhard and Harriman before him at the time the invention was made, to modify the system of Eberhard to include upon determining in the comparator that the at least one write address and the read address are the same, stalling the read request in the memory controller because it would have provided needed coherency by reducing the average performance cost of the coherency scheme (col. 2, lines 27-28) as taught by Harriman.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111 (c) to consider these references fully when responding to this action. The documents cited therein teach stalling read request that matches write request and processing read request different than write request.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre M. Vital whose telephone number is (703) 306-5839. The examiner can normally be reached on Mon-Fri, 8:30 am - 6:00 pm, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (703) 306-2903. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 16, 2004



Pierre M. Vital  
Examiner  
Art Unit 2188